

What is claimed is:

1. A method for characterizing a timing delay curve of a circuit component, said timing delay curve having a first region and a second region, comprising:
  - determining a first delay equation representing said first region of the delay curve;
  - determining a second delay equation representing said second region of the delay curve; and
  - determining a corner capacitance of said circuit component, said corner capacitance representing a transition point from said first region to said second region.
2. The method of claim 1 wherein said determining a first delay equation further comprises:
  - creating a model of said circuit component, said model having a variable resistance, said variable resistance changing substantially linearly between a maximum resistance and a minimum resistance; and
  - deriving an equation for the delay of said model for  $0 < t < \tau$ , where  $t$  represents time and  $\tau$  represents an input signal edge time.
3. The method of claim 2 wherein said deriving an equation step further comprises:
  - determining an equation for the gradient of a linear change between said maximum resistance and said minimum resistance of said variable resistance.
4. The method of claim 1 wherein said determining said second delay equation further comprises:
  - creating a model of said circuit component, said model having a variable resistance, said variable resistance changing substantially linearly between a maximum resistance and a minimum resistance; and
  - deriving an equation for the delay of said model for  $t \leq \tau$ , where  $t$  represents time and  $\tau$  represents an input signal edge time.
5. The method of claim 1 wherein said determining the corner capacitance step further comprises:
  - setting said first delay equation equal to said second delay equation; and
  - solving said first delay equation and said second delay equation for the capacitance.

6. The method of claim 1 wherein said determining a first delay equation further comprises:

determining a delay equation for a curvilinear region of the delay curve.

7. The method of claim 1 wherein said determining a second delay equation further comprises:

determining a delay equation for a linear region of the delay curve.

8. The method of claim 1 wherein said determining a first delay equation further comprises:

setting the delay,  $d$ , of said circuit component equal to  $\frac{\tau}{1-f} \left[ 1 - 2^{-(1-f)RC/\tau} \right]$ , where

$R$  represents the variable resistance of said component,  $C$  represents a capacitance of said component,  $\tau$  represents an input signal edge time, and  $f$  represents a constant fraction between zero and one.

9. The method of claim 1 wherein said determining a second delay equation further comprises:

setting the delay,  $d$ , of said circuit component equal to  $fRC \ln 2$ , where  $R$  represents the variable resistance of said component,  $C$  represents the capacitance of said component, and  $f$  represents a constant fraction between zero and one.